

CARYA XCOLLINA LAUGHLIN
SCARIT HICKORY

Hibrida nova
Carya texana Buckl. X tomentosa Nutt.

Section Eucarya

Kendall Laughlin (1890-)
165 Pine Ave., Chicago, Ill.

Arbor rotunda 57 cm diametro et 18 m alta, circiter 154 annos nata, cum irregularibus membris insigniter in inferiore languidis. Cortex cinereus, densus, in irregulares ad perpendicularum directas laminas ruptus. Rami unci glauci cum lenticellis, glabri, pingues; inferiores rami languidi. Novi temporis ramuli tomentosi et brunnei, raro glabri et fuscii rufo-brunnei cum multis pallidis lenticellis, 3-6 mm densi. Extremae hiemales gemmae 8-19 mm longae, angulatae vel ovoidae, tomentulosae. Pan-sae gemmarum squamae majoris exempli oblongae, 2.5-3.5 cm longae, subtiliter sericeo-pubescentes in exteriori superficie.

Folia 19-37 cm longa. 8% foliorum habent 5 foliola, 84% habent 7 foliola et 8% habent 9 foliola, quae acuminata sunt, serrata incurvis dentibus, supra glabra et lucida galbina, subtus pallidiora et tomentosa juventate et breviter pubescentia maturitate, specie relinquentia minutas nigras notulas siccando, cum pingui robiginosa tomentosa costa media; extremum foliolulum rhomboido-ellipticum, cuneatum, 9.5-17 cm longum, 3.5-7 cm latum, circiter 22 venis lateralibus in utroque latere, sessile aut in petiolulo 4 mm longo; lateralia foliola sessilia, elliptica et saepe leviter falcata, supremis 10-13.5 cm longis, cuneatis, 18-27 venis lateralibus in utroque latere, mediis bifurcis ante attingendum margini; infimis 4-6.1 cm longis.

Petioli et raches 1.1-2 mm densi, dense villosi vel tecti corymbis pallidorum cinereorum pilorum usque ad serum tempus.

(4)-7 stipitati pedunculi in finibus surculorum 3 staminatis galbinis julis 6.5-17 cm longis de quoque pedunculo suspensis.

Fructus 24-30 mm longi, fere globosi, in apice complanati, dehiscente folliculo 3(-4) mm denso 4 valvis, uno segmento majore aliis. Nux pallido-cinerea, 22-24 mm longa, 23-25 mm lata, compressa et languide 4-angulata, eduro denso cortice et semine circiter duas-quintas molis occupante.

Holotypus in Kewensibus Hortis.

CARYA XCOLLINA LAUGHLIN

A round-shaped tree 57 cm in diameter and 18 m tall, about 154 years old, with irregular limbs conspicuously drooping in the lower portion. Bark medium gray, thick, broken into irregular vertical plates. Branches crooked, bluish-gray with lenticels, glabrous, stout; lower branches drooping. Season's branchlets tomentose and brown, rarely glabrous and dark reddish brown with many pale lenticels, 3-6 mm thick. Terminal winter buds 8-19 mm long, angled or ovoid, tomentulose. Expanded bud-scales of the larger type oblong, 2.5-3.5 cm long, finely silky-pubescent on their outer surface.

Leaves 19-37 cm long. 8% of the leaves have 5 leaflets, 84% have 7 leaflets and 8% have 9 leaflets, which are acuminate, serrate with incurved teeth, glabrous and lustrous moderate yellow green above, paler beneath and tomentose when young and short-pubescent at maturity, apparently leaving minute black specks in drying, with a stout rusty tomentose midrib; the terminal leaflet rhomboid-elliptic, cuneate, 9.5-17 cm long, 3.5-7 cm wide, with an average of 22 pairs of side veins, sessile or on a petiolule 4 mm long; the lateral leaflets sessile, elliptic and often slightly falcate, the upper pair 10-13.5 cm long, cuneate, with 18-27 pairs of side veins, the middle ones forking before reaching the margin; the lowest pair 4-6.1 cm long.

Petioles and rachises 1.1-2 mm thick, densely vil-
lous or covered with clusters of pale gray hairs until late in the season.

(4-)7 stalked peduncles at the ends of twigs with 3 staminate yellow green catkins 6.5-17 cm long suspended from each peduncle.

Fruit 24-30 mm long, nearly globose, flattened at the apex, with a 4-valved dehiscent husk 3(-4) mm thick, one segment larger than the others. Nut light gray, 22-24 mm long, 23-25 mm wide, compressed and faintly 4-angled, with a very hard thick shell and a seed occupying about two-fifths of its volume.

DISCUSSION

This newly discovered hybrid of the Black Hickory Carya texana Buckl. and the Mockernut Hickory C. tomentosa Nutt., which has a diameter of 23 inches, a circumference of 5 feet 10 inches, a height of 58 feet and a spread of 50 feet, is located at an elevation of about 980 feet on the south slope of Scarritt Point in North Terrace Park, Kansas City, Jackson County, Missouri,

U.S.A.

The surrounding area is mowed, as the accompanying pictures show, and no seedlings are allowed to grow. On the upland a few hundred feet to the west and southwest there are at least four Shagbark Hickories, a Mockernut Hickory, and a curious tree 4'2" in circumference that is undoubtedly a cross between collina and ovata (Mill.) K.Koch. There was once a Black Hickory at the west end of the upland overlooking Cliff Drive and the Chestnut Trafficway canyon, but it was destroyed by a vandal. There are also White, Black and Chinkapin Oaks, Sycamores, American Elms and a Basswood on the ridge.

Texana is at the northern limit of its range at this spot. Tomentosa is sparingly represented north of the Missouri River. It is well known that hybrids occur most often at the limit of the range of one of the parents.

The bark of collina resembles texana. Most branchlets of collina are tomentose and brown like tomentosa, but a few of them are glabrous and dark reddish brown with lenticels like texana. The fruit of collina is like texana. The terminal winter buds of collina are larger than either parent and tomentulose like tomentosa.

The statement on the following page shows a comparison of the characters of collina with its parents. The characters of ovata are also shown, altho there is no chance that collina is related to it. Most of the figures are averages and extreme measurements are not shown.

The last column of the statement shows that the characters of collina are intermediate between the parents in the majority of the cases. Most of the disparities relate to the size of the leaflets and buds. This study and a study that I have made of the ternary hybrid collina X ovata show that an effect of hybridity is to create larger vegetative parts.

The holotype will be deposited in the Royal Botanic Gardens, Kew, England, and an isotype will be deposited in the United States National Museum, Washington, D.C.

MORPHOLOGY OF CARYA

CHARACTER	TAXON				INSTANCES "*" where THE CHARACTERS OF COLLINA ARE INTERME- DIATE BETWEEN THE PARENTS
	OVATA	TOMENTOSA	XCOLLINA	TEXANA	
Bark	Shaggy.	Dark gray, ridged and fissured.	Medium gray, thick, broken into irregular vertical plates.	Gray, thick, broken into irregular vertical plates.	*
Branchlets:	Reddish brown.	Greenish brown.	Brown, rare- ly dark reddish brown.	Reddish brown with many pale lenticels.	*
Pubescence	Glabrous or pubescent.	Tomentulose	Tomentose, rarely glabrous.	Glabrous.	
Thickness mm	3-5.5	4	4-5	3	
Terminal Winter Buds:					
Pubescence	Tomentose.	Tomentulose.	Tomentulose	Glabrous.	*
Shape	Ovoid or oblong.	Ovoid.	Angled or ovoid.	Ovoid.	*

Length mm	10-19	8-13	13-14	7
Length of Leaves cm	23	28	28	18
% of Leaflets:	100%	15% 77% 8%	8% 84% 8%	#63% #34% #3%
Pubescence of Undersurface of Leaflets	Midrib villosu- lous.	Tomentose.	Tomentose.	Glabrous.
Terminal Leaflet: Length cm	14	12.5	13	9
Length Width	2.1	2.0	2.5	2.5
Pairs of Side Veins	20	17	22	17
Leaflets of Upper Pair: Length cm	12	11	12	8-9
Width Length	.48	.50	.32	.38
Pairs of Side Veins	19	16	22-23	17

CHARACTER	TAXON				INSTANCES "X" WHERE THE CHARACTERS OF COLLINA ARE INTERMEDIATE BETWEEN THE PARENTS
	OVATA	TOMENTOSA	XCOLLINA	TEXANA	
Leaflets of Upper Pair: Length of Lowest Pair	1.81	1.65	2.38	1.40	
Petioles and Rachises: Pubescence	Glabrous.	Tomentose.	Villous.	Glabrous.	*
Thickness mm	1.3	2-2.8	1.5-1.6	1.1	*
Fruit: Length mm	38	36	27-29	29-30	
Width mm	31	36	29	29	*
Nut: Length mm	26	27	23-24	23	*
Width mm	22	27	24	22	*
Thickness of Husk mm	8	4-5	3	2-3	*

These figures were taken from a study of 35 specimens from Swope Park, Kansas City.
A study of material from five other localities in Missouri, Kansas and Arkansas
combined with the figures from Swope Park results in the following percentages:

5 leaflets--64%
7 leaflets--32%
9 leaflets--4%

The statement in Sargent's Manual and other books that the number of leaflets of
texana is usually 7 appears to be incorrect.



CARYA XCOLLINA



X 1/5

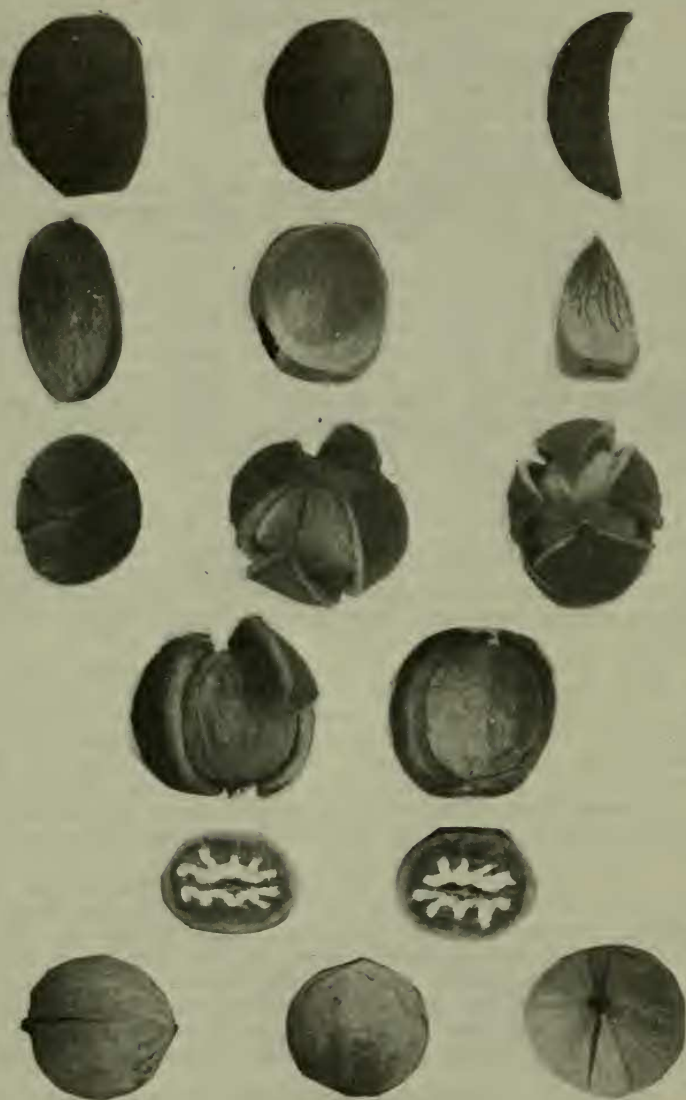


CARYA XCOLLINA IN EARLY SPRING

X 2/9



CARYA XCOLLINA



FRUIT OF CARYA XCOLLINA X 7/9